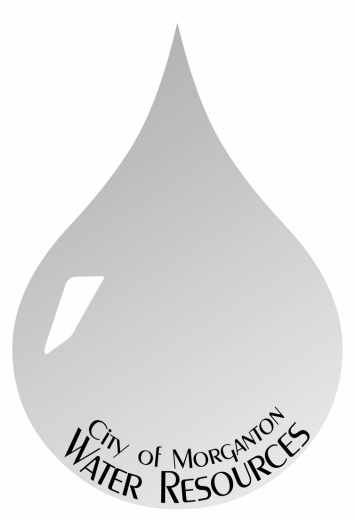
City of Morganton
2007 Wastewater System Performance Report



The City of Morganton operates a Wastewater treatment system consisting of a 10.5 million-gallon a day wastewater treatment plant, 14 sewer lift stations and more than 200 miles of collection system. Morganton's collection system operates from the shore of Lake James to the Town of Glen Alpine, to portions of the Salem area and most of the City of Morganton. The collection system is a complex network of piping materials ranging from 6-inch diameter vitrified clay pipe, plastic pipe, and ductile iron pipe to cement pipe up to 54 inches in diameter.

NPDES permit #NC0026573, allows the discharge of treated wastewater into the Catawba River. Morganton provides a compost product, which is regulated by requirements in Permit #WQ0002127, to its customers. The wastewater treatment plant is a pure oxygen type of facility. Its treatment units are barscreens, flow monitoring, cyclone degritting, primary clarification, aeration, secondary clarification, disinfection and chlorine removal before discharge to the river. The solids process consists of raw sludge storage to aerobic digesters, plus activated sludge to aerobic digesters, polymer addition, centrifuges, and composting. The compost product is then made available for sale to the public as "Morganite." Morganton's collection system also is regulated through a permit which is WQCS00028.

During 2007, Morganton treated more than 1.7 billion gallons of wastewater. Performance of the wastewater treatment plant was compliant 5 out of 12 months. The plant was non-compliant in January and July of 2007 due to problems with high chlorine residuals. High selenium levels were reported for March, April, May, and a selenium sampling oversight occurred in November of 2007. There were eight reportable overflows of the sewer system in 2007. Five of the sanitary sewer overflows were less than 800 gallons each. The largest spill was 8,000 gallons which was due to grease in the siphon line that crossed the Catawba River. Three thousand gallons were spilled out of a sewer line near Sloan Ave due to grease blockage. In August, 2,800 gallons spilled into Hunting Creek due to a storm drain failure which ruptured a sewer line.

The collection and distribution division monitors the water and sewer system. This small crew of dedicated personnel routinely goes into the lines to maintain and repair them. During 2007, this division maintained 932 manholes, flushed 163,123 feet of sewer line, used jet power degreaser on 6,710 feet of sewer line and used a robotic television camera to inspect 4,230 feet of sewer. Wastewater crews completed 55 sewer taps during the 2007 calendar year, made 39 repairs to the system and relieved 70 stoppages. Sewer maintenance crews bush-hogged a total of 97,410 feet of sewer line right-of-way.

Annually city crews use a remote camera to help clean and inspect portions of the sewer system. The city plans continue to use contractors, when the money becomes available, to augment its preventive maintenance program. The results will be used to identify areas that need to be repaired and to plan appropriate action.

The remote camera that is used has its own light system and can rotate 180 degrees. The camera can tell if the lines are in good condition or whether there are cracks that are allowing the surrounding soil to fall into the sewer line. Cameras can also locate missing taps or indicate where leaks are occurring. This information tells us if we need to make an immediate repair or if the repair can be scheduled.

Fats, oils and grease continue to plague the collection system. Residential customers should avoid placing food into sinks and sanitary sewer lines. Particles accumulate in the customer's home as well as the collection system causing maintenance issues for the homeowner and the city.

Often our customers are the first to find problems. If you see something that appears to be wrong, please call the 24-hour number for water and sewer utilities at 438-5276. If you have any questions please call Don Danford, Director of Water Resources, at 438-5285.